This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-54. (Canceled)

55. (New) An isolated sweet taste receptor comprising a T1R3 polypeptide, wherein the T1R3 polypeptide is encoded by a nucleotide sequence that hybridizes under moderately stringent hybridization conditions to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.

56. (New) The isolated receptor of claim 55, wherein the T1R3 polypeptide is encoded by a nucleotide sequence that hybridizes under highly stringent hybridization conditions to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.

57. (New) The isolated receptor of claim 55, wherein the T1R3 polypeptide has an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.

58. (New) The isolated receptor of claim 55, wherein the receptor comprises a T1R3 polypeptide and a heterologous polypeptide.

59. (New) The isolated receptor of claim 58, wherein the T1R3 polypeptide and the heterologous polypeptide are non-covalently linked.

60. (New) The isolated receptor of claim 58, wherein the T1R3 polypeptide and the heterologous polypeptide are covalently linked.

61. (New) The isolated receptor of claim 58, wherein the heterologous polypeptide is a T1R2 polypeptide that is encoded by a nucleotide sequence that hybridizes under moderately stringent hybridization conditions to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO:7, 8, or 9.

62. (New) The isolated receptor of claim 58, wherein the heterologous polypeptide is a T1R2 polypeptide is encoded by a nucleotide sequence that hybridizes under highly stringent hybridization conditions to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO:7, 8, or 9.

63. (New) The isolated receptor of claim 62, wherein the T1R2 polypeptide has an amino acid sequence of SEQ ID NO:7, 8, or 9.

64. (New) The isolated receptor of claim 55, wherein the receptor has G protein coupled receptor activity.

65. (New) The isolated receptor of claim 55, wherein the receptor specifically binds to antibodies raised against SEQ ID NO: 15, 20, 23, or 25.

66. (New) An isolated sweet taste receptor comprising a T1R3 polypeptide and a T1R2 polypeptide, wherein the T1R3 polypeptide is encoded by a nucleotide sequence that hybridizes under highly stringent hybridization conditions to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO:15, 20, 23, or 25; and wherein the T1R2 polypeptide that is encoded by a nucleotide sequence that hybridizes under highly stringent hybridization conditions to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO:7, 8, or 9.

67. (New) An antibody that specifically binds to the taste receptor claim 55.

68. (New) The antibody of claim 67, wherein the antibody specifically binds to a taste receptor comprising T1R2 and T1R3.

69. (New) The antibody of claim 67, wherein the T1R2 polypeptide and the T1R3 polypeptide are non-covalently linked.

70. (New) The antibody of claim 67, wherein the T1R2 polypeptide and the T1R3 polypeptide are covalently linked.

71. (New) An isolated polypeptide encoded by a nucleic acid that hybridizes under moderately stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.

72. (New) The polypeptide of claim 71, wherein the polypeptide is encoded by a nucleic acid that hybridizes under highly stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.

73. (New) The polypeptide of claim 71, wherein the polypeptide is encoded by nucleic acid that encodes an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.

74. (New) The polypeptide of claim 71, wherein the polypeptide is encoded by nucleic acid that has a nucleotide sequence of SEQ ID NO:14, 19, 22, or 24.

75. (New) An antibody that specifically binds to the polypeptide of claim 71.

76. (New) An isolated nucleic acid that hybridizes under moderately stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.

77. (New) The nucleic acid of claim 76, wherein the polypeptide is encoded by a nucleic acid that hybridizes under highly stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.

78. (New) The nucleic of claim 76, wherein the polypeptide is encoded by nucleic acid that encodes an amino acid sequence of SEQ ID NO:15, 20, 23, or 25.

79. (New) The nucleic acid of claim 76, wherein the nucleic acid that has a nucleotide sequence of SEQ ID NO:14, 19, 22, or 24.

80. (New) An isolated polypeptide encoded by a nucleic acid that hybridizes under moderately stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:7, 8, or 9.

81. (New) The polypeptide of claim 80, wherein the polypeptide is encoded by a nucleic acid that hybridizes under highly stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:7, 8, or 9.

82. (New) The polypeptide of claim 80, wherein the polypeptide is encoded by nucleic acid that encodes an amino acid sequence of SEQ ID NO:7, 8, or 9.

83. (New) The polypeptide of claim 80, wherein the polypeptide is encoded by nucleic acid that has a nucleotide sequence of SEQ ID NO:10, 11, or 12.

84. (New) An antibody that specifically binds to the polypeptide of claim 80.

85. (New) An isolated nucleic acid that hybridizes under moderately stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:7, 8, or 9.

86. (New) The nucleic acid of claim 85, wherein the polypeptide is encoded by a nucleic acid that hybridizes under highly stringent conditions to a nucleic acid that encodes an amino acid sequence of SEQ ID NO:7, 8, or 9.

87. (New) The nucleic of claim 85, wherein the polypeptide is encoded by nucleic acid that encodes an amino acid sequence of SEQ ID NO:7, 8, or 9.

88. (New) The nucleic acid of claim 85, wherein the nucleic acid that has a nucleotide sequence of SEQ ID NO:10, 11, or 12.